

RCE for COLLISION AVOIDANCE SYSTEM (Reissue) Serial # 09/892,185 GAU 3661 Examiner Eric M. Gibson
Applicant Brett O. Hall 4208 Lazy Creek Dr. Marietta, GA 30066 770-517-5991

IN THE CLAIMS

72-02

In light of the enclosed argument, please consider the following amendments to the claims. Deletions are bracketed ([delete]) and insertions are underlined (insert):

1. (Amended) A collision avoidance system, comprising:
 - a) [a plurality of vehicle trigger sensors each] at least one trigger sensor associated with a roadway, [each said vehicle] said at least one trigger sensor capable of sensing at least one parameter [of] associated with one or more vehicles;
 - b) [a plurality of vehicle restrictors each] at least one vehicle restrictor associated with said roadway, [each said] said at least one restrictor comprising a[n elongate] member disposed generally transverse to said roadway, each said restrictor capable of being actuated [to raise or lower relative to said roadway surface] to impede passage thereover of said vehicles; and
 - c) a controller programmed to determine the likelihood of a collision [between] involving any of said vehicles based on said vehicle parameters received from said trigger sensors, programmed to determine [which of a selected one or more of said vehicles] at least one vehicle that should be slowed or stopped to avoid said collision based on said vehicle parameters [and based on local traffic laws], and programmed to determine at least one selected vehicle restrictor that is being approached by said selected vehicle, wherein said at least one selected vehicle restrictor is actuated by communication from said controller to impede the passage of said selected vehicle to avoid said collision.
2. (Amended) The collision avoidance system of claim 1, wherein said at least one vehicle parameter is selected from the group [consisting] comprised of vehicle

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presence, position, direction, or speed.

3. (Amended) The collision avoidance system of claim 1, wherein said at least one trigger sensor is selected from the group [consisting of] of technologies capable of detecting vehicle parameters comprising radar devices, lasers, optical devices, ultrasonic devices, induction loop devices, wireless transmitters and receivers, pressure-responsive switches, [and] or combinations thereof.

4. (Amended) The collision avoidance system of claim 1, [wherein said] further comprising at least one [trigger sensor comprises an] environmental sensor to indicate roadway moisture or sight visibility.

8. (Amended) The collision avoidance system of claim 1, further comprising a monitoring device associated with said roadway and in [real time] communication with emergency law enforcement, medical, [or] fire department or other predetermined personnel.

9. (Amended) The collision avoidance system of claim 8, wherein said at least one monitoring device comprises [a] at least one camera.

10. (Amended) The collision avoidance system of claim 1, further comprising [an] at least one emergency vehicle pass-through control that deactivates the actuation of the vehicle restrictors in response to a communication from an emergency law enforcement, medical, or fire department vehicle.

11. (Amended) The collision avoidance system of claim 1, further comprising:
a) [a plurality of] at least one pedestrian trigger sensor[s each] associated with said roadway, each said pedestrian trigger sensor

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capable of sensing at least one parameter of one or more pedestrians;

and

b) [at least one alarm associated with said roadway to alert operators of said vehicles of an approaching pedestrian to avoid collision;
and]

c) said controller programmed to determine the likelihood of a collision between said pedestrian and [any of said vehicles, and to select and activate said alarm] said selected vehicle and to select and activate said selected vehicle restrictor [immediately] in the path of said selected vehicle.

12. (Amended) The collision avoidance system of claim 11, wherein said at least one pedestrian parameter[s] comprises the presence, position, speed, or direction of the sensed pedestrian.

13. (Amended) The collision avoidance system of claim 11, [wherein] further comprising at least one alarm associated with said roadway [alerts said pedestrians of an approaching vehicle to avoid] wherein said at least one alarm provides notification of potential vehicle-to-pedestrian collision.

14. (Amended) The collision avoidance system of claim 1, further comprising:

a) [a plurality of] at least one train trigger sensor[s each] associated with said roadway, each said train trigger sensor capable of sensing at least one parameter of one or more trains; and

b) [a plurality of alarms associated with said roadway to alert operators of said vehicles of an approaching train to avoid collision; and]

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c) said controller programmed to determine the likelihood of a collision between said train and [any of said vehicles, and to select and activate said alarm] said selected vehicle and to select and activate said selected vehicle restrictor [immediately] in the path of said selected vehicle.

15. (Amended) The collision avoidance system of claim 14, wherein said at least one train parameter[s] comprises the presence, position, speed, or direction of the sensed train.

16. (Amended) A method for collision avoidance, comprising the steps of:

- a) sensing at least one parameter[s] of [a plurality of vehicles] at least one vehicle;
- b) determining the likelihood of a collision involving [any of said vehicles] said at least one sensed vehicle based on said at least one vehicle parameter[s];
- c) determining [which of a selected one or more of said vehicles] at least one vehicle that should be slowed or stopped to avoid said collision based on said at least one vehicle parameter[s] and local traffic laws;
- d) determining at least one selected vehicle restrictor, of a plurality of vehicle restrictors in a roadway, that is being approached by said selected vehicle based on said at least one vehicle parameter[s] and said vehicle restrictor location[s]; and
- e) actuating said selected vehicle restrictor to control [the parameters of] said selected vehicle to avoid said collision.

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17. (Amended) The collision avoidance method of claim 16, wherein said at least one vehicle parameter[s] comprises the presence, position, speed, or direction of the sensed vehicle.

18. (Amended) The collision avoidance method of claim 16, further comprising the steps of:

- a) sensing at least one parameter[s] of at least one pedestrian;
- b) determining the likelihood of a collision between said at least one pedestrian and any of said vehicles; and
- c) [actuating at least one alarm to alert an operator of said vehicle of said approaching vehicle to avoid such a collision.]
- d) actuating at least one vehicle restrictor in a roadway to control said vehicle to be slowed or stopped to avoid said collision with at least one pedestrian.

19. (Amended) The collision avoidance method of claim 18, wherein said at least one pedestrian parameter[s] comprises the presence, position, speed, or direction of the sensed pedestrian.

20. (Amended) The collision avoidance method of claim 16, further comprising the steps of:

- a) sensing at least one parameter[s] of at least one train;
- b) determining the likelihood of a collision between said at least one train and any of said vehicles; and

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c) actuating at least one vehicle restrictor[s] in a roadway to control [the parameters of] said vehicle to be slowed or stopped to avoid said collision with at least one train; and]

d) [actuating at least one alarm to alert an operator of said vehicle of said approaching train to avoid such a collision.]

21. (Amended) The collision avoidance method of claim 20, wherein said at least one train parameter[s] comprises the presence, position, speed, or direction of the sensed train.

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Add as new claim 22

22. The collision avoidance system of claim 1, further comprising a control means to adjust operational parameters, whereby system responses are changed.

Add as new claim 23

23. A collision avoidance system for use with a traffic control means capable of displaying a permissive or a non-permissive indicia, said system of collision avoidance, comprising:

a) at least one vehicle restrictor associated with said roadway, said at least one vehicle restrictor comprising a member disposed generally transverse to said roadway, capable of being actuated to impede passage thereover of at least one vehicle; and

b) a controller responsive to the status of the traffic control means, wherein said at least one vehicle restrictor is actuated by communication from said controller to impede the passage of at least one of the vehicles.

[Add as new claim 24]

24. A method of collision avoidance for use with a traffic control means capable of displaying permissive or non-permissive indicia, said method of collision avoidance comprising the steps of:

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- a) determining the permissive status of the traffic control means that is associated with a roadway and is configured to permit the merging or alternate intersecting of vehicles, pedestrians, or trains; and
- b) impeding vehicular movement associated with the roadway when the status of the traffic control means is not permissive.

[Add as new claim 25]

25. A method of collision avoidance, comprising the steps of:

- a) sensing at least one parameter of at least a first vehicle;
- b) sensing at least one parameter of at least a second vehicle;
- c) determining the likelihood of a collision involving said at least first vehicle and said at least second vehicle based on said vehicle parameters; and
- d) impeding the movement of at least one of said vehicles to avoid said collision.

[Add as new claim 26]

26. A method of collision avoidance, comprising the steps of:

- a) sensing at least one parameter of at least one vehicle;
- b) sensing at least one parameter of at least one pedestrian or at least one train;
- c) determining the likelihood of a collision involving said at least one vehicle with said at least one pedestrian or said at least one train based on said at least one vehicle parameter and said at least one pedestrian or train parameter; and
- d) impeding the movement of at least one said vehicle to avoid said collision.

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STATEMENT OF STATUS OF REISSUE CLAIMS

All claims 1-26 are pending.

Please direct all questions regarding this application to the Applicant as indicated below.

Respectfully Submitted,

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